

AVERAGE GRADE SPOT LOCATION

AVERAGE GRADE
TABULATIONS

NUMBER	EXISTING GRADE ELEVATION +	PROPOSED GRADE ELEVATION +
1	341.50	341.20
2	341.05	341.00
3	340.21	340.62
4	339.91	339.96
5	337.50	339.31
6	336.10	338.23
7	336.20	337.05
8	336.10	336.36
9	335.14	335.26
10	334.92	334.00
11	333.38	333.40
12	332.40	337.00
13	331.50	337.00
14	328.10	337.00
15	326.62	326.62
16	326.28	326.28
17	325.00	325.00
18	324.60	324.60
19	324.30	324.30
20	323.80	323.80
21	322.70	322.70
22	322.80	322.80
23	323.20	323.20
24	320.10	317.40
25	320.50	317.50
26	321.10	318.10
27	321.70	319.00
28	319.80	320.00
29	324.54	321.00
30	329.00	323.00
31	330.00	325.00
32	333.00	326.00
33	333.24	327.00
34	333.23	328.00
35	333.70	330.00
36	333.80	331.00
37	334.90	336.10
38	337.30	338.00
39	339.60	339.00
40	341.10	340.00
41	341.90	341.50
42	341.80	342.00
43	341.70	341.80
AVERAGE=	331.53	330.89

SITE TABULATIONS:

Current /Proposed Zoning:		B-2
Total Site Area:		2.63 AC
Proposed Use:		Mixed Use (Residential/Retail)
F.A.R. / Density		
Proposed Retail Level GFA		
Grocery / Other Retail Area		66,144 GFA (1)
Residential Lobby Area		4,378 GFA (1)
Proposed Residential Levels		302,316 GFA (1)
Total Gross Floor Area		372,838 GFA (1)
Minimum F.A.R.:		N/A
Maximum F.A.R.:		N/A
Proposed F.A.R.:		3.25 (2)(3)
Total Proposed Dwelling Units:		282
Proposed Residential Density:		107 DU/AC
Maximum Building Height Allowed:		115 FT W/ Bonus
		(75 FT By-Right + 40 FT By S.E.)
Proposed Building Height: (measured from average grade)		89.47 FT
Open Space (%):	REQUIRED N/A	PROVIDED ±5%
<u>YARD REQUIREMENTS:</u>		
	REQUIRED	PROVIDED
Minimum Building Setback Broad Street Frontage	14 FT	20 FT
Minimum Building Setback Annandale Road Frontage	14 FT	14 FT
Minimum Building Setback: Side Yard	20 FT (West Bndry-'R' District) 0 FT (East Bndry-'B2 District)	20 FT (West) 0 FT (East)
<u>PARKING TABULATIONS:</u>		
	REQUIRED	PROVIDED
Parking Retail:		
Grocery/Other Retail (63,470 SF Retail Area)	317 Spaces (1 Space/200 SF)	205 Spaces (incl. 5 H.C. spaces) (1 space/310 sf)
Parking Multi-Family Residential:		
Studio/Efficiency Unit (1 Space/ D.U.) (18 DU)(6%)	467 Spaces (1.6 Spaces/D.U.)	368 Spaces (incl. 8 H.C. spaces) (1.3 Spaces/D.U.)
One Bedroom Unit (1.5 Space/ D.U.) (158 DU)(56%)		
Two Bedroom Unit (2 Space/ D.U.) (106 DU)(38%)		
TOTAL PARKING:	784 Spaces	573 Spaces (4)(5)
<u>LOADING TABULATIONS:</u>		
	REQUIRED	PROVIDED
Retail (Grocery 1 Space)(General Merch 1 Space)	2 Space	2 Space
Multi-Family	0 Space	1 Space

- (1) Gross Floor Area (GFA) reported per code definition (outside of exterior wall/midpoint of interior wall dimension).
- (2) F.A.R. does not include area of structured parking.
- (3) F.A.R. is based on current site area prior to dedication/vacation of road frontage.
- (4) Final provided parking quantity for both the residential and commercial uses is subject to change with dwelling unit count, and final retail GFA as determined at final site plan and final parking reduction plan, by the City Planning Commission under Section 48-971(2) of the city code.
- (5) Refer to conceptual parking plan herein for layout and proposed distribution of parking spaces.

GENERAL NOTES:

- THE PROPERTIES SHOWN HEREON ARE LOCATED ON CITY OF FALLS CHURCH TAX ASSESSMENT RECORDS AS FOLLOWS:
PARCEL I.D. ADDRESS OWNER
52-309-111 301 W. BROAD ST THREE O ONE WEST BROAD LIMITED PARTNERSHIP
52-309-412 255 W. BROAD ST CITY OF FALLS CHURCH ECONOMIC DEVELOPMENT AUTHORITY
52-309-414 W. BROAD ST CITY OF FALLS CHURCH
- THE SUBJECT PROPERTY IS CURRENTLY ZONED B-2 (CENTRAL BUSINESS) ZONING DISTRICT.
- THE SUBJECT PROPERTY LIES WITHIN AN AREA DESIGNATED AS "MIXED USE" ON THE FUTURE LAND USE PLAN MAP OF THE CITY OF FALLS CHURCH COMPREHENSIVE PLAN.
- THE SUBJECT PROPERTY IS CURRENTLY SERVED BY CITY OF FALLS CHURCH WATER AND SANITARY SEWER UTILITIES.
- BOUNDARY, TOPOGRAPHY, AND EXISTING FEATURES SHOWN HEREON WERE OBTAINED FROM FIELD RUN SURVEY PREPARED BY BOWMAN CONSULTING GROUP DATED: APRIL, 2012.
- INFORMATION OF EXISTING UTILITIES (ABOVE AND BELOW GROUND) IS BASED ON VISUAL FIELD OBSERVATION AND AVAILABLE CITY RECORDS. EXISTENCE OF ANY UNDERGROUND UTILITIES HAS NOT BEEN CONFIRMED.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO UTILITY EASEMENTS HAVING A WIDTH OF TWENTY-FIVE (25) OR GREATER LOCATED WITHIN THE SUBJECT PROPERTY.
- THERE ARE NO AREAS OF SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION OR PRESERVATION ON THE SITE.
- THERE IS NO FLOODPLAIN WITHIN THE SUBJECT PROPERTY AS DESIGNATED BY THE FEDERAL INSURANCE ADMINISTRATION, UNITED STATES GEOLOGICAL SURVEY OR CITY OF FALLS CHURCH. THERE IS NO RESOURCE PROTECTION AREAS (RPA) OR ENVIRONMENTAL QUALITY CORRIDOR (EQC) WITHIN THE SUBJECT PROPERTY INDICATED ON FAIRFAX COUNTY GIS DATA.
- STORMWATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICES (BMP) ARE PROPOSED WITH THIS APPLICATION AND CONCEPTUAL DESIGN COMPUTATIONS ARE DEMONSTRATED HEREIN. FINAL DESIGN OF SWM/BMP FACILITIES WILL BE PROVIDED AT THE TIME OF FINAL SITE PLAN APPLICATION.
- THIS SITE SHALL BE DEVELOPED IN ONE PHASE SUBJECT TO REQUIRED PLAN APPROVALS AND PERMIT ISSUANCE.

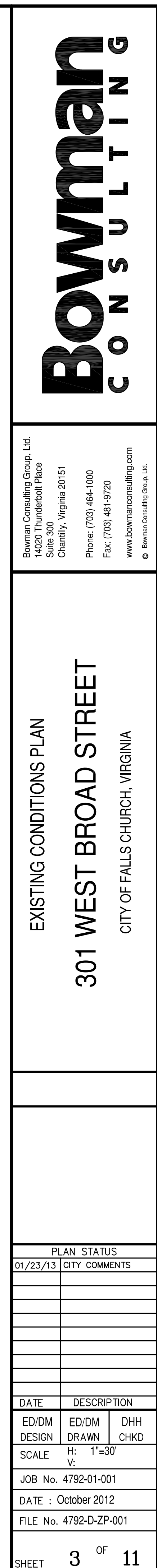
SPECIAL EXCEPTION NOTES:

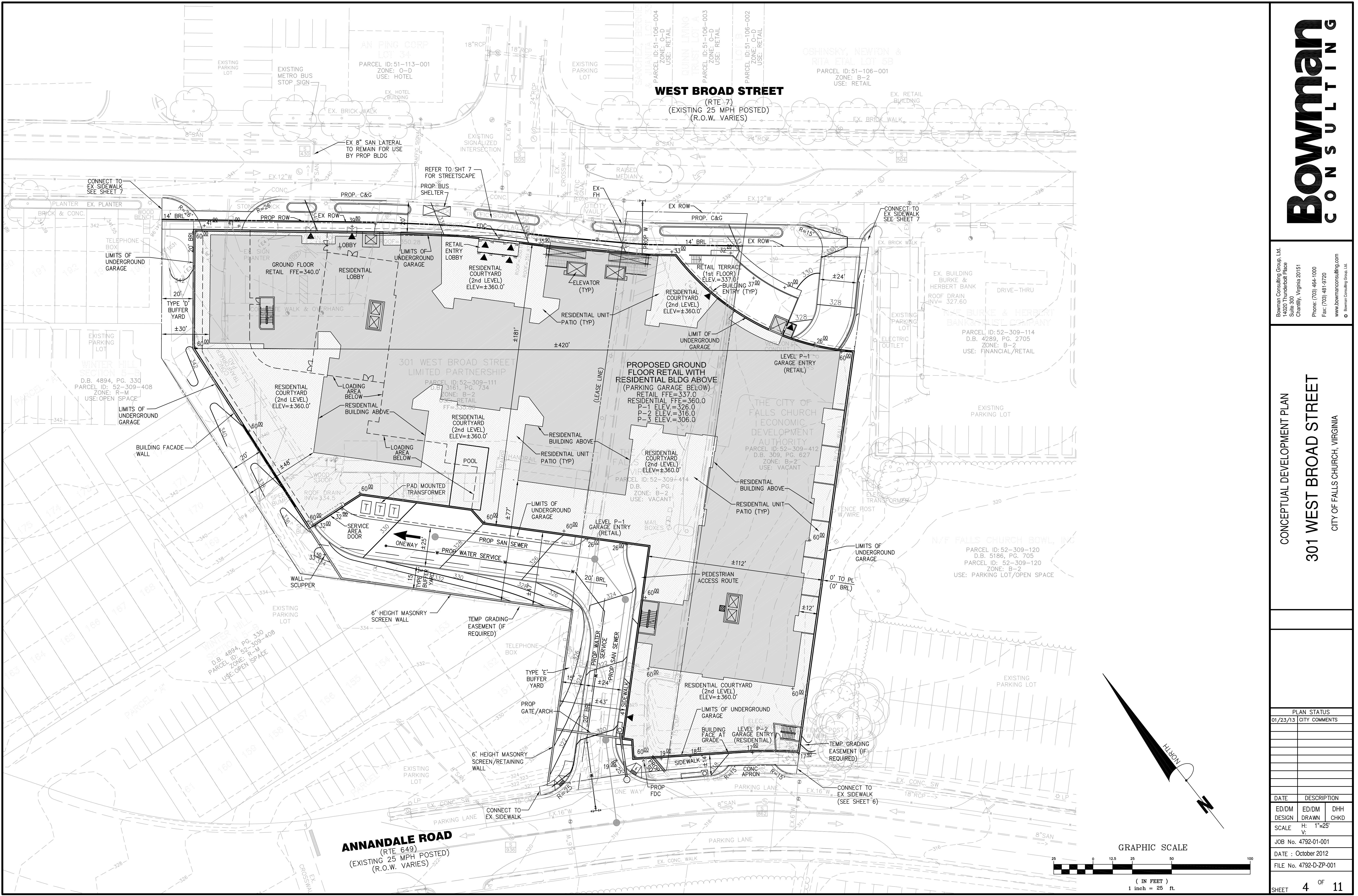
- Z.O. SECTION 48-90 (GENERAL REQUIREMENTS) & SECTION 48-488 (B-2 DISTRICT REQUIREMENTS)
1. THE PURPOSE OF THIS SPECIAL EXCEPTION APPLICATION IS TO:
- A. ALLOW FOR RESIDENTIAL USE WITHIN A MIXED-USE REDEVELOPMENT WITHIN THE B-2 ZONING DISTRICT.
- B. ALLOW FOR ADDITIONAL BUILDING HEIGHT (OF APPROXIMATELY 14.5 FT)

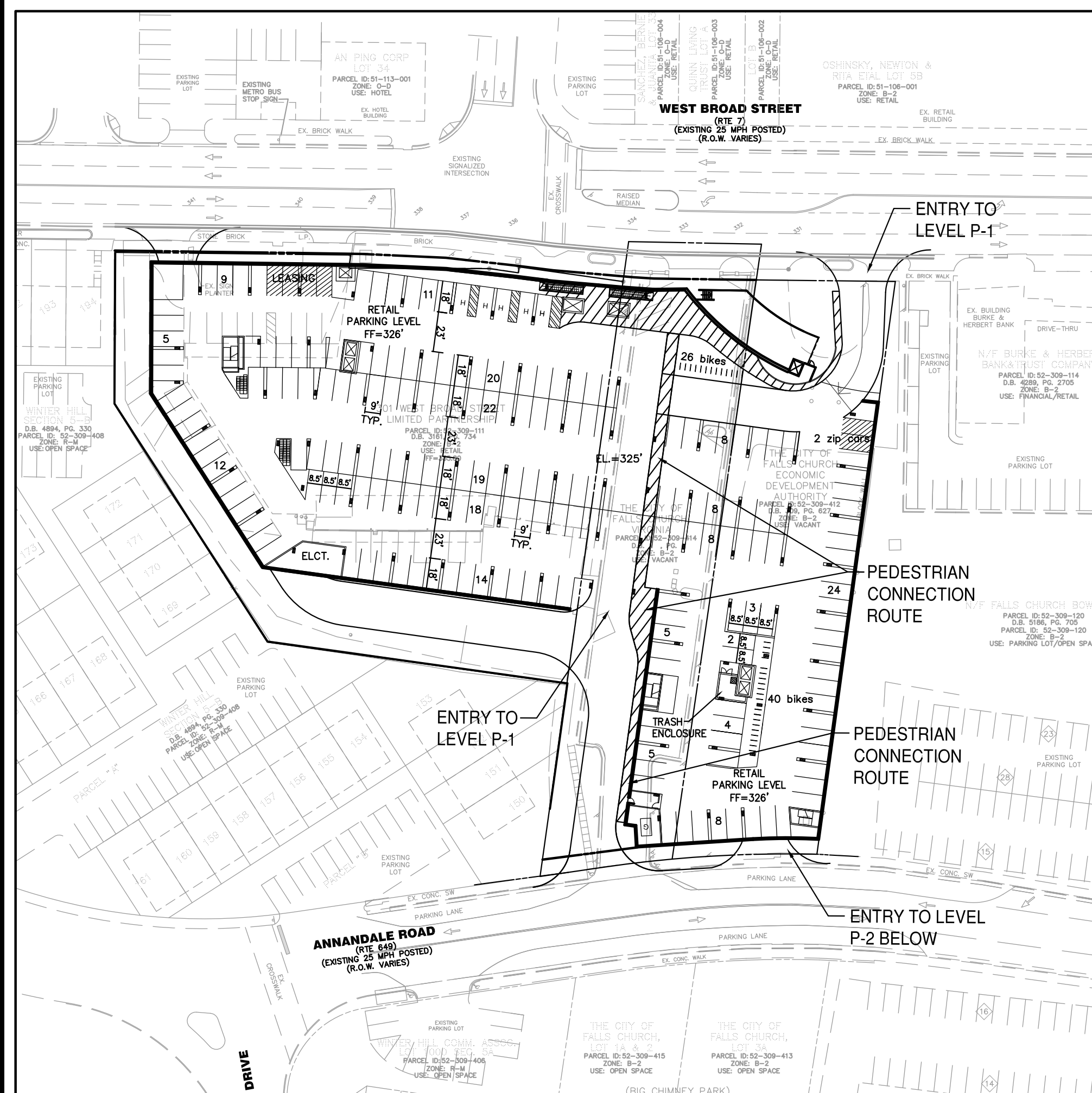
WAIVER / MODIFICATION REQUESTS:

- Z.O. SECTION 48-938: VEHICULAR ENTRANCES
- WAIVER OF SECTION 48-938(4) REQUIRING MINIMUM 100 FT SETBACK OF COMMERCIAL LOADING/PARKING VEHICULAR ENTRANCE TO AN 'R' (RESIDENTIAL) DISTRICT: TO A DISTANCE OF 30 FT (AS MEASURED FROM THE CENTERLINE OF PROPOSED ENTRANCE ON ANNANDALE RD AND 40 FT FROM CENTERLINE OF PROPOSED ENTRANCE ON BROAD ST) AS SHOWN ON THE S.E./CDP

- Z.O. SECTION 48-1004-PARKING
- MODIFICATION OF THE REQUIRED PARKING (784 SPACES) TO THOSE PROVIDED PARKING (573 SPACES) AS DEMONSTRATED IN THE TRAFFIC REDUCTION PLAN AND AS SHOWN HEREIN.







PARKING LEVEL P-1 (RETAIL/RESIDENTIAL)

SCALE: 1"=60'

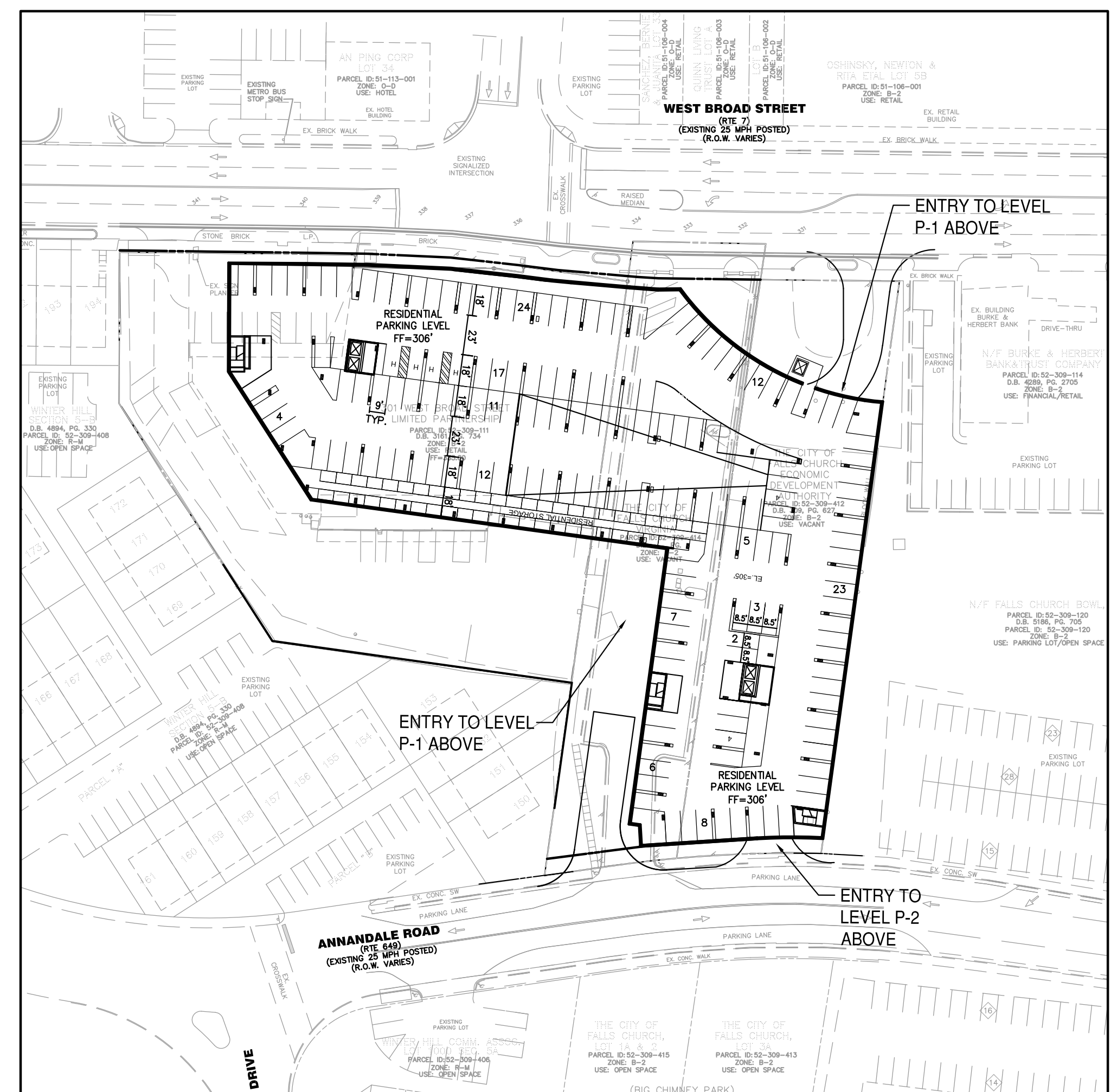
GROCERY PARKING:	183 SPACES
RETAIL PARKING:	18 SPACES
LEASING PARKING:	4 SPACES
RETAIL PARKING TOTAL:	205 SPACES
BIKE TOTAL:	66 SPACES



PARKING LEVEL P-2 (RESIDENTIAL)

SCALE: 1"=60'

RESIDENTIAL PARKING: 226 SPACES
(INCLUDING 4 HANDICAP)
BIKE TOTAL: 56 SPACES



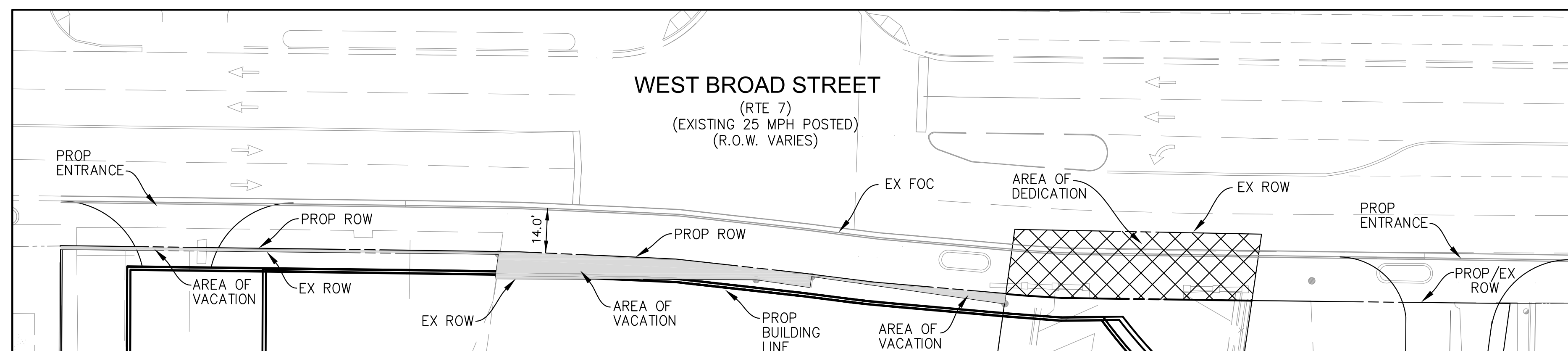
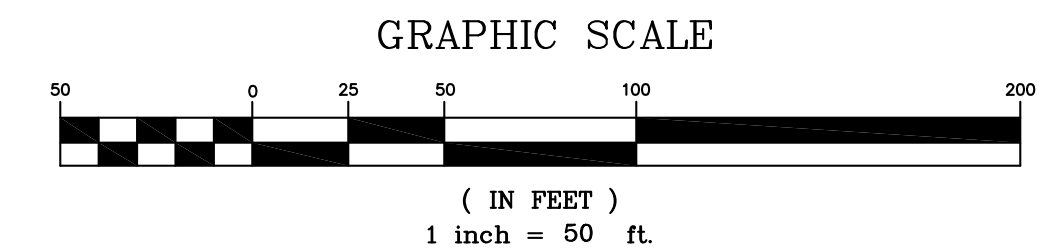
PARKING LEVEL P-3 (RESIDENTIAL)

SCALE: 1"=60'

RESIDENTIAL PARKING: 142 SPACES
(INCLUDING 4 HANDICAP)

NOTES:

1. GARAGE DIAGRAMS AND PARKING NUMBERS ARE FOR INFORMATION AND ILLUSTRATION PURPOSES ONLY AND ARE SUBJECT TO CHANGE WITH FINAL DESIGN.
2. REFER TO ARCHITECTURAL PLANS WITHIN THE SPECIAL EXCEPTION PACKAGE DOCUMENTS FOR ADDITIONAL INFORMATION.



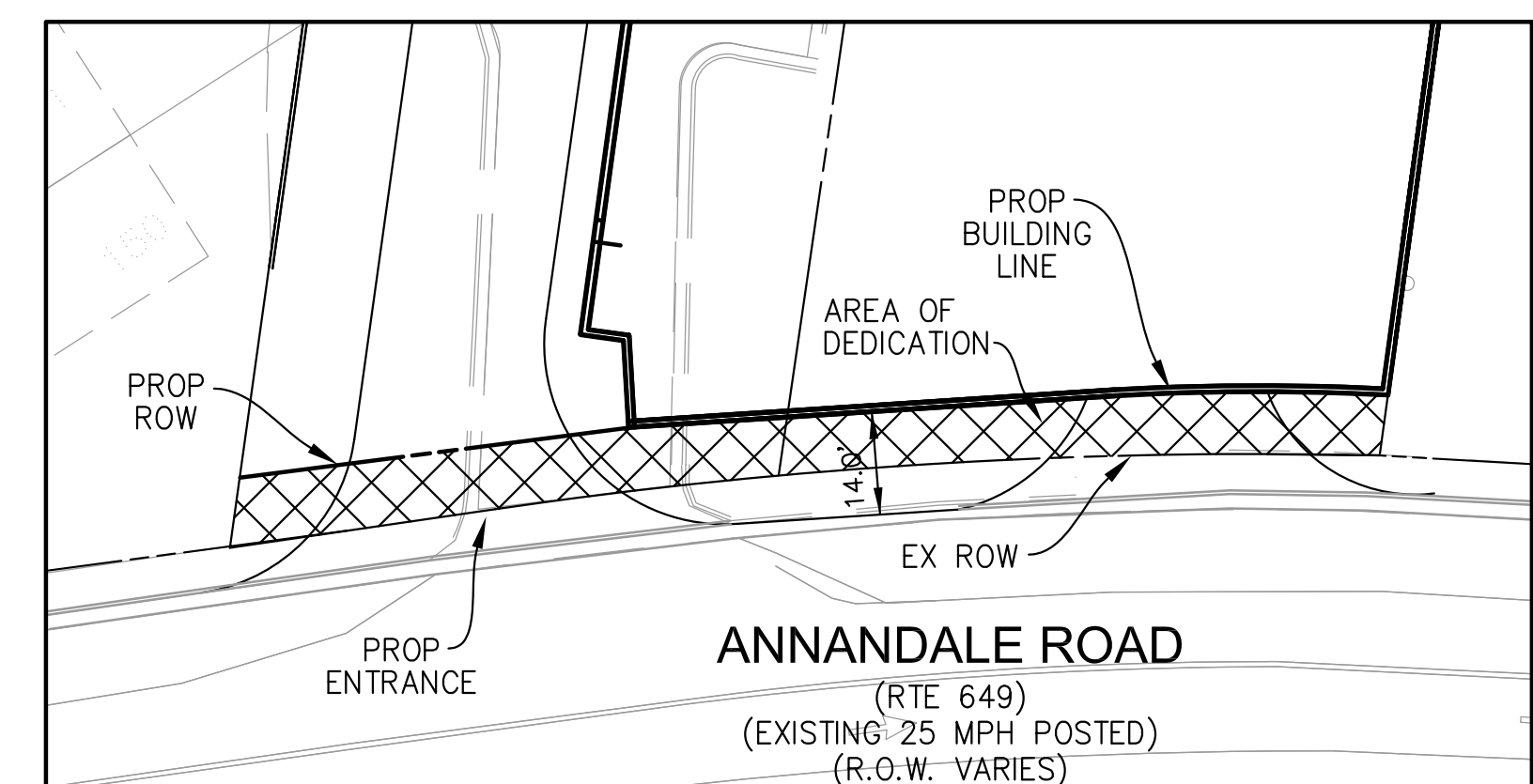
BROAD STREET FRONTAGE EXHIBIT

SCALE: 1"=25'

LEGEND:

PROPOSED ROW DEDICATION

PROPOSED ROW VACATION



ANNANDALE RD FRONTAGE EXHIBIT

SCALE: 1"=25'

PLAN STATUS		
7/23/13	CITY	COMMENTS
DATE	DESCRIPTION	
D/D ESIGN	ED/DM DRAWN	DHH CHKD
SCALE	H: AS NOTED V:	
DOB	No. 4792-01-001	
DATE	: October 2012	
SCALE	No. 4792-D-ZP-001	

PLANTING TABULATIONS

20' BUFFER (PER Z.O. CHAPTER 48, ARTICLE V, DIV. 8)

LINEAR FEET OF SCREEN REQUIRED:	250'
TYPE OF SCREEN REQUIRED:	TYPE D
WIDTH OF SCREEN PROVIDED:	20'
SHADE TREES REQUIRED:	10 TREES OR 4 PER 100 L.F.
SHADE TREES PROVIDED:	10 TREES
EVERGREEN TREES REQUIRED:	30 TREES OR 12 PER 100 L.F.
EVERGREEN TREES PROVIDED:	30 TREES
SMALL SHRUBS REQUIRED:	63 SHRUBS OR 25 PER 100 L.F.
SMALL SHRUBS PROVIDED:	106 SHRUBS
LARGE SHRUBS REQUIRED:	63 SHRUBS OR 25 PER 100 L.F.
LARGE SHRUBS PROVIDED:	66 SHRUBS

15' BUFFER (PER Z.O. CHAPTER 48, ARTICLE V, DIV. 8)

LINEAR FEET OF SCREEN REQUIRED:	286'
TYPE OF SCREEN REQUIRED:	TYPE E
WIDTH OF SCREEN PROVIDED:	15'
SHADE TREES REQUIRED:	12 TREES OR 4 PER 100 L.F.
SHADE TREES PROVIDED:	13 TREES
LARGE SHRUBS REQUIRED:	72 SHRUBS OR 25 PER 100 L.F.
LARGE SHRUBS PROVIDED:	77 SHRUBS

SUGGESTED STREETSCAPE PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HEIGHT/SIZE	CALIPER	CONDITION/REMARKS
LARGE DECIDUOUS TREES					
QP	QUERCUS PHELLOS	WILLOW OAK		2.5" CAL. MIN.	B&B
SHRUBS					
IG	ILEX GLABRA	INKBERRY HOLLY	30" MIN.		CONT.
JH	JUNIPERUS HORIZONTALIS	CREeping JUNIPER	6"-12" MIN.		CONT.
PL	PRUNUS LAUROCERASUS 'CHIPKAENSIS'	CHERRY LAUREL	30" MIN.		CONT.
GROUNDCOVER					
HC	HYPERICUM CALYGINUM	ST. JOHN'S WORT	1 GAL.		CONT.
LM	LIROPE MUSCARI 'BIG BLUE'	LILYTurf	1 GAL.		CONT.

SUGGESTED SITE SCREENING PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HEIGHT	CALIPER	CONDITION/REMARKS
LARGE DECIDUOUS TREES					
AR	ACER RUBRUM	RED MAPLE		2" CAL. MIN.	B&B
GT	GLEDTISIA TRIACANTHOS	THORNLESS HONEY LOCUST		2" CAL. MIN.	B&B
PA	PLANTANUS X ACERIFOLIA	LONDON PLANETREE		2" CAL. MIN.	B&B
QP	QUERCUS PALUSTRIS	PIN OAK		2" CAL. MIN.	B&B
EVERGREEN TREES					
IO	ILEX OPACA	AMERICAN HOLLY	6' MIN.		B&B
JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	6' MIN.		B&B
SHRUBS					
CA	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	24"-30"		CONT.
IG	ILEX GLABRA	INKBERRY HOLLY	24"-30"		CONT.
IT	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	24"-30"		CONT.
IV	ILEX VERTICILLATA	WINTERBERRY	24"-30"		CONT.
JS	JUNIPERUS CHINENSIS 'PFTZERIANA'	PFTZER JUNIPER	24"-30"		CONT.
KL	KALMIA LATIFOLIA	MOUNTAIN LAUREL	24"-30"		CONT.
MP	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	24"-30"		CONT.
PL	PRUNUS LAUROCERASUS 'CHIPKAENSIS'	CHERRY LAUREL	24"-30"		CONT.
RR	ROSA 'RADRAZZ'	KNOCKOUT ROSE	24"-30"		CONT.
VP	VIBURNUM X PRAGENSE	PRAGUE VIBURNUM	24"-30"		CONT.

GENERAL LANDSCAPE NOTES

MATERIALS

- THE TREES AND SHRUBS THAT ARE PLANTED SHALL BE OF THE SPECIES AND SIZE SPECIFIED ON THE APPROVED PLANS UNLESS SUBSTITUTIONS ARE APPROVED BY THE CITY.
- ALL TREE AND SHRUB SIZES SHALL MEET THE STANDARDS SPECIFIED IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD FOR NURSERY STOCK, (ANSI Z60.1).

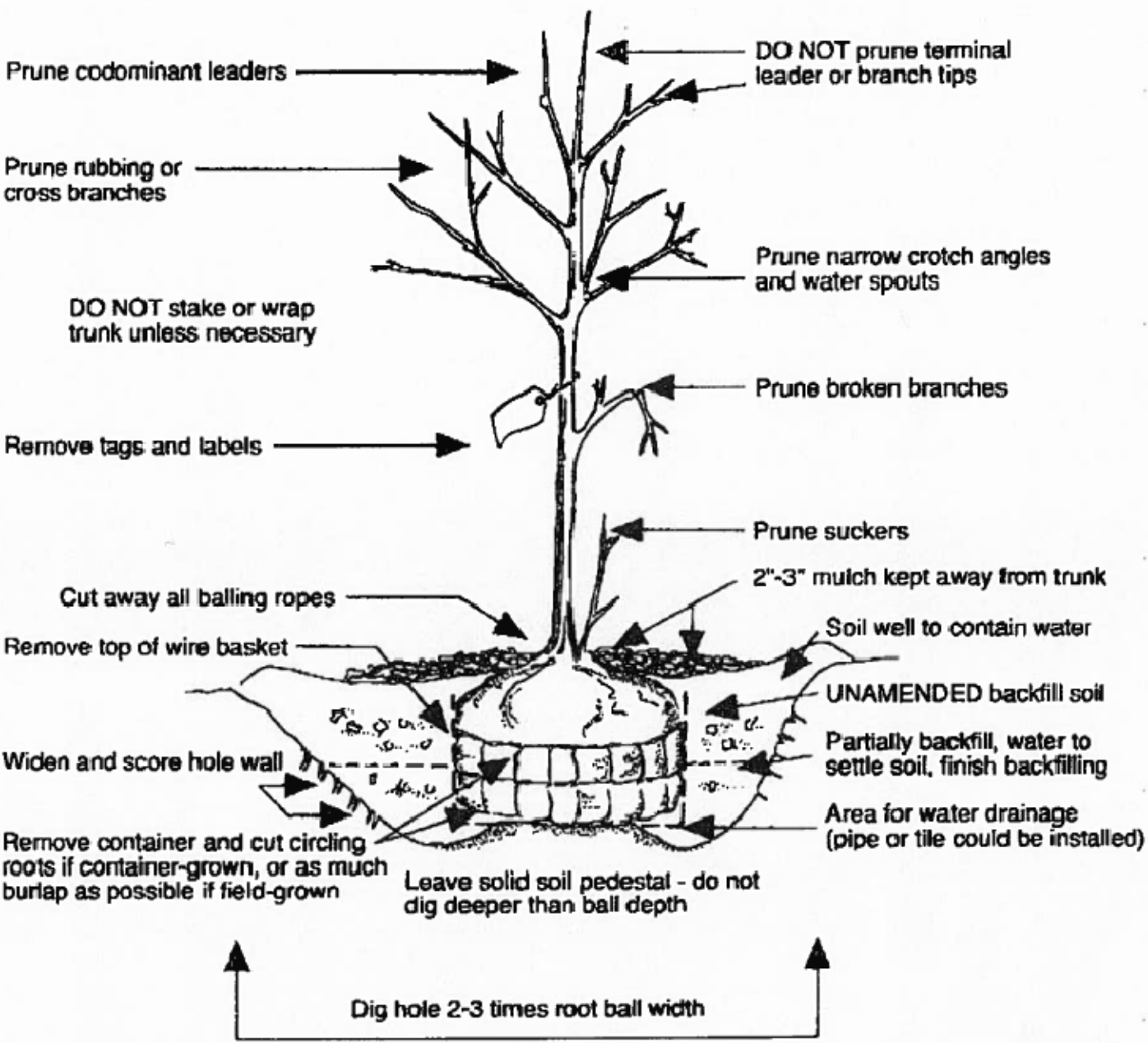
DELIVERY AND TEMPORARY STORAGE

- PLANTS SHALL BE PROTECTED DURING DELIVERY TO PREVENT DESICCATION OF LEAVES.
- TREES AND SHRUBS SHOULD BE PLANTED ON DAY OF DELIVERY. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT UNPLANTED PLANTS BY KEEPING THEM IN SHADE, WATERED AND PROTECTED WITH SOIL, MULCH OR OTHER ACCEPTABLE MATERIAL.
- TREES AND SHRUBS SHALL NOT REMAIN UNPLANTED FOR MORE THAN TWO WEEKS.

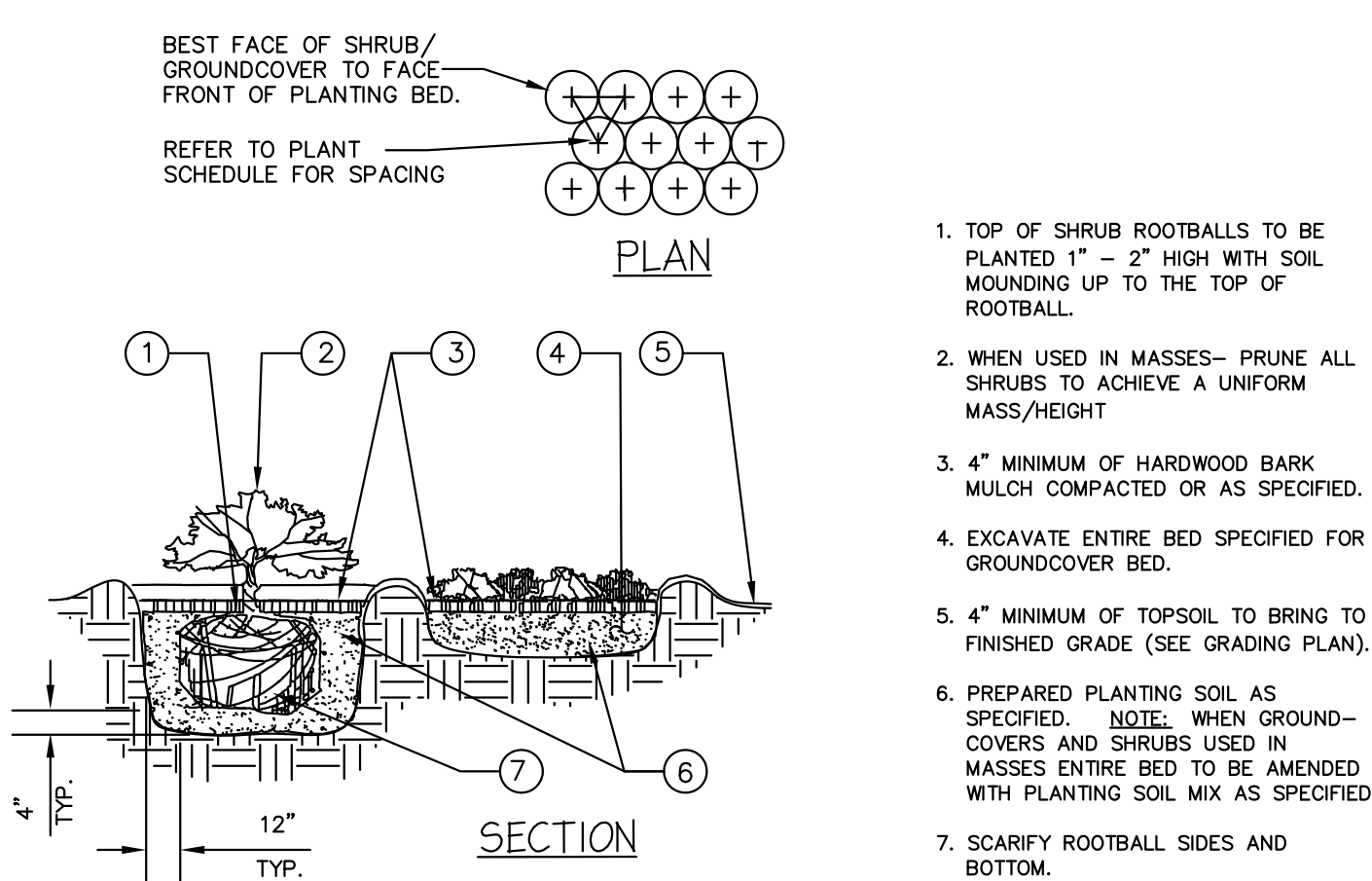
PLANTING OF NURSERY STOCK

- ALL TREES AND SHRUBS SHALL BE PLANTED AS SPECIFIED IN THE LATEST EDITION OF THE "TREE AND SHRUB PLANTING GUIDELINES" PREPARED BY THE VIRGINIA COOPERATIVE EXTENSION, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.
- IF PLANTING IN AREAS THAT HAVE BEEN PREVIOUSLY COMPACTED, THE SOIL SHALL BE PROPERLY PREPARED (TILLED AND AMENDED AS NEEDED BASED ON SOIL SAMPLES) TO A DEPTH OF 1 FOOT (0.3 METERS), PRIOR TO INSTALLATION OF LANDSCAPE MATERIAL. SOIL WITHIN INDIVIDUAL PLANTING HOLES SHALL NOT BE AMENDED.
- THE STAKING AND GUYING OF TREES IS NOT REQUIRED EXCEPT WHERE SITE CONDITIONS WARRANT THEIR USE. EXAMPLES OF CONDITIONS WHERE THESE METHODS MAY BE NECESSARY INCLUDE: PLANTING IN WINDY LOCATIONS, ON STEEP SLOPES, OR WHERE VANDALISM MAY BE A CONCERN. ALL STAKES AND GUYS MUST BE REMOVED WITHIN ONE YEAR OF PLANT INSTALLATION.
- ALL TREES AND SHRUBS SHALL BE MULCHED AFTER PLANTING, TO A MINIMUM DEPTH OF 2 INCHES (5.1 CENTIMETERS), BUT NO MORE THAN 3 INCHES (7.6 CENTIMETERS), WITH AN APPROPRIATE MULCH MATERIAL SUCH AS PINE BARK, PINE NEEDLES, WOOD CHIPS OR SHREDDED BARK. MULCH SHALL COVER THE ENTIRE ROOT AREA AND SAUCER; HOWEVER, MULCH SHALL NOT BE PLACED WITHIN 6 INCHES (15.3 CENTIMETERS) OF THE TRUNK.

TREE PLANTING



SHRUB/GROUNDCOVER PLANTING





COVER TYPE					
KEY	COVER TYPE	COMMON SPECIES TYPE	SUCCESSION STAGE	CONDITION	TOTAL AREA
	EARLY SUCCESSION FOREST COMMUNITY	BLACK LOCUST, WHITE MULBERRY, BLACK CHERRY, SUGAR MAPLE, RED MAPLE	EARLY	FAIR/POOR	.50 AC.
	DEVELOPED LAND	N/A	N/A	N/A	1.68 AC.
	LANDSCAPE TREE CANOPY	AMERICAN HOLLY, JAPANESE ZELKOVA, FLOWERING DOGWOOD, NORWAY SPRUCE	EARLY/MIDDLE	FAIR/POOR	.22 AC.
	MISC. SHRUB AND GROUND COVER	N/A	N/A	FAIR/GOOD	.15 AC.

LEGEND

EXISTING INDIVIDUAL TREE
(SEE TREE INVENTORY)

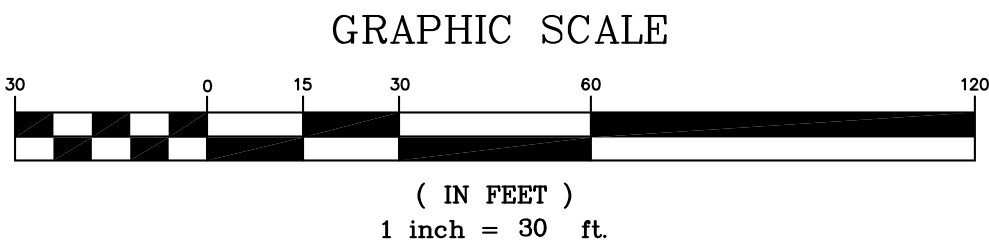
EXISTING TREE LINE

Broad Street, Falls Church, VA
Date of site visit: June 19, 2012
Certified Arborist: Gregg D. Eberly MA-4616A

Plan Label	Botanic Name	Common Name	Caliper (DBH)	Condition Rating	Species Rating
1	Quercus phellos	Willow Oak	14	60	70
2	Quercus phellos	Willow Oak	18	60	70
3	Robinia pseudoacacia	Black Locust	13	68	50
4	Robinia pseudoacacia	Black Locust	31	68	50
5	Robinia pseudoacacia	Black Locust	17	68	50
6	Morus alba	White Mulberry	22	48	40
7	Robinia pseudoacacia	Black Locust	30	48	50
8	Robinia pseudoacacia	Black Locust	36	60	50
9	Robinia pseudoacacia	Black Locust	20	24	50
10	Robinia pseudoacacia	Black Locust	24	60	50
11	Morus alba	White Mulberry	30	60	40
12	Morus alba	White Mulberry	17	40	40
13	Morus alba	White Mulberry	28	48	40
14	Prunus serotina	Black Cherry	24	52	50
15	Acer rubrum	Red Maple	28	72	70
*16	Robinia pseudoacacia	Black Locust	2	48	50
17	Ulmus americana	American Elm	12	DEAD	60
18	Morus alba	White Mulberry	15	40	40
19	Robinia pseudoacacia	Black Locust	24	60	50
20	Tilia cordata	Littleleaf Linden	18	72	70
*21	Robinia pseudoacacia	Black Locust	4	68	50
22	Ulmus americana	American Elm	20	48	60
23	Robinia pseudoacacia	Black Locust	18	48	50
24	Acer rubrum	Red Maple	32	68	70
25	Robinia pseudoacacia	Black Locust	12	48	50
26	Acer saccharinum	Silver Maple	28	60	40
27	Morus alba	White Mulberry	18	48	40
28	Morus alba	White Mulberry	30	48	40
29	Acer saccharum	Sugar Maple	26	52	70
30	Tilia cordata	Littleleaf Linden	23	68	70
31	Robinia pseudoacacia	Black Locust	21	64	50
32	Zelkova serrata	Japanese Zelkova	27	80	70
33	Zelkova serrata	Japanese Zelkova	25	80	70
34	Acer rubrum	Red Maple	36	76	70
35	Morus alba	White Mulberry	30	60	40
36	Morus alba	White Mulberry	48	60	40
37	Acer rubrum	Red Maple	18	60	70
38	Acer rubrum	Red Maple	21	60	70
39	Morus alba	White Mulberry	11	60	40
40	Ilex opaca	American Holly	20	76	70
41	Ilex opaca	American Holly	24	76	70
42	Ilex opaca	American Holly	12	76	70
43	Ilex opaca	American Holly	17	76	70
44	Ilex opaca	American Holly	22	76	70
45	Ilex opaca	American Holly	21	76	70
46	Ilex opaca	American Holly	18	76	70
47	Ilex opaca	American Holly	18	76	70
48	Ilex opaca	American Holly	16	76	70
49	Ilex opaca	American Holly	16	76	70
50	Ilex opaca	American Holly	15	76	70
51	Ilex opaca	American Holly	14	76	70
52	Ilex opaca	American Holly	16	72	70
53	Ilex opaca	American Holly	25	72	70
54	Ilex opaca	American Holly	16	72	70
55	Ilex opaca	American Holly	13	76	70
56	Ilex opaca	American Holly	13	76	70
57	Ilex opaca	American Holly	16	72	70
*58	Fraxinus pennsylvanica	Green Ash	10	64	40
*59	Acer saccharum	Sugar Maple	20	60	70
*60	Robinia pseudoacacia	Black Locust	4	64	50
*61	Robinia pseudoacacia	Black Locust	3	48	50
*62	Robinia pseudoacacia	Black Locust	4	48	50
*63	Robinia pseudoacacia	Black Locust	8	60	50
*64	Robinia pseudoacacia	Black Locust	5	60	50
*65	Robinia pseudoacacia	Black Locust	8	60	50
*66	Robinia pseudoacacia	Black Locust	5	60	50
*67	Robinia pseudoacacia	Black Locust	2	DEAD	50
*68	Robinia pseudoacacia	Black Locust	8	60	50
*69	Robinia pseudoacacia	Black Locust	3	60	50
*70	Robinia pseudoacacia	Black Locust	3	60	50
*71	Robinia pseudoacacia	Black Locust	6	DEAD	50
*72	Robinia pseudoacacia	Black Locust	7	60	50

Plan Label	Botanic Name	Common Name	Caliper (DBH)	Condition Rating	Species Rating
*73	Robinia pseudoacacia	Black Locust	8	60	50
*74	Robinia pseudoacacia	Black Locust	6	72	50
*75	Robinia pseudoacacia	Black Locust	3	68	50
*76	Prunus serotina	Black Cherry	5	80	50
*77	Robinia pseudoacacia	Black Locust	5	60	50
*78	Robinia pseudoacacia	Black Locust	6	60	50
*79	Robinia pseudoacacia	Black Locust	3	60	50
*80	Robinia pseudoacacia	Black Locust	6	64	50
*81	Robinia pseudoacacia	Black Locust	3	60	50
*82	Robinia pseudoacacia	Black Locust	5	72	50
*83	Robinia pseudoacacia	Black Locust	6	72	50
*84	Robinia pseudoacacia	Black Locust	6	72	50
*85	Robinia pseudoacacia	Black Locust	4	72	50
*86	Robinia pseudoacacia	Black Locust	6	60	50
*87	Robinia pseudoacacia	Black Locust	5	60	50
*88	Robinia pseudoacacia	Black Locust	5	60	50
*89	Robinia pseudoacacia	Black Locust	6	72	50
*90	Prunus serotina	Black Cherry	6	72	50
*91	Prunus serotina	Black Cherry	3	48	50
*92	Robinia pseudoacacia	Black Locust	3	72	50
*93	Robinia pseudoacacia	Black Locust	6	60	50
*94	Robinia pseudoacacia	Black Locust	6	68	50
*95	Robinia pseudoacacia	Black Locust	8	68	50
*96	Prunus serotina	Black Cherry	3	72	50
*97	Prunus serotina	Black Cherry	3	72	50
*98	Morus alba	White Mulberry	6	52	40
*99	Robinia pseudoacacia	Black Locust	4	60	50
*100	Robinia pseudoacacia	Black Locust	7	60	50
*101	Prunus serotina	Black Cherry	12	48	50
*102	Prunus serotina	Black Cherry	14	60	50
*103	Acer saccharum	Sugar Maple	12	60	70
*104	Robinia pseudoacacia	Black Locust	3	64	50
*105	Prunus serotina	Black Cherry	3	60	50
*106	Acer saccharum	Sugar Maple	14	48	70
*107	Robinia pseudoacacia	Black Locust	4	64	50
*108	Acer saccharum	Sugar Maple	12	60	70
*109	Robinia pseudoacacia	Black Locust	4	64	50
*110	Prunus serotina	Black Cherry	5	60	50
*111	Robinia pseudoacacia	Black Locust	8	72	50
*112	Robinia pseudoacacia	Black Locust	4	48	50
*113	Robinia pseudoacacia	Black Locust	4	48	50
*114	Robinia pseudoacacia	Black Locust	8	DEAD	50
*115	Robinia pseudoacacia	Black Locust	5	48	50
*116	Robinia pseudoacacia	Black Locust	2	48	50
*117	Ilex opaca	American Holly	4	72	70
*118	Ilex opaca	American Holly	4	72	70
*119	Ilex opaca	American Holly	6	72	70
*120	Ilex opaca	American Holly	5	72	70
*121	Robinia pseudoacacia	Black Locust	5	68	50
*122	Robinia pseudoacacia	Black Locust	3	68	50
*123	Morus alba	White Mulberry	9	48	40
*124	Morus alba	White Mulberry	9	48	40
*125	Morus alba	White Mulberry	8	48	40
*126	Cornus florida	Flowering Dogwood	2	76	60
*127	Picea abies	Norway Spruce	9	72	70
*128	Ilex opaca	American Holly	8	76	70
*129	Ilex opaca	American Holly	8	76	70
*130	Ilex opaca	American Holly	6	60	70
*131	Ilex opaca	American Holly	6	60	70
*132	Morus alba	White Mulberry	8	48	40
*133	Morus alba	White Mulberry	10	48	40
*134	Morus alba	White Mulberry	10	60	40
*135	Morus alba	White Mulberry	10	48	40
*136	Pyrus calleryana	Bradford Pear	8	76	40
*137	Quercus rubra	Red Oak	8	68	70
*138	Quercus rubra	Red Oak	3	68	70
*139	Quercus rubra	Red Oak	6	72	70
*140	Robinia pseudoacacia	Black Locust	8	72	50
*141	Juglans nigra	Black Walnut	7	64	70
*142	Prunus serotina	Black Cherry	12	64	50
*143	Juglans nigra	Black Walnut	6	60	70
*144	Ulmus americana	American Elm	22	72	60

Notes:
1. Condition Rating based on formula provided by the Guide for Plant Appraisal published by the ISA.
Condition Rating: 90-100 Excellent, 70-89 Good, 50-69 Fair, 25-49 Poor, 05-24 Very Poor
2. Species Rating based on formula provided by the Guide for Plant Appraisal published by the ISA.
3. Off site trees included in this inventory had critical root zones located in or on subject property.
4. All trees with a minimum 2" D.B.H. were rated.
5. * The locations of trees 1-6, 21 & 58-144 are approximate and have not been surveyed.



EXISTING VEGETATION MAP & TREE INVENTORY

301 WEST BROAD STREET

CITY OF FALLS CHURCH, VIRGINIA

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PLAN STATUS
01/23/13 CITY COMMENTS

DATE	DESCRIPTION
ED/DM	ED/DM DHH
DESIGN	DRAWN CHKD
SCALE	H: 1"=30'
	V:
JOB No.	4792-01-001
DATE :	October 2012
FILE No.	4792-D-ZP-001

SITE DISCHARGE COMPUTATIONS:

Q10- PRE-EXISTING CONDITIONS:
Q10 PRE-EX = 2.54 x 0.80 x 7.27 = 14.77 CFS

Q10- RE-DEVELOPMENT CONDITIONS:
Q10 RE = 2.54 x 0.90 x 7.27 = 16.62 CFS

MAXIMUM DETENTION VOLUME:
Vd = 300 x (Q10 POST - Q10 PRE) = 300 x (16.62 - 14.77) = 300 x (1.85 CFS)

Vd = 555 CF

QUNCONTROLLED = 0.48 x 0.90 x 7.27 = 3.14 CFS
QALLOW = QPRE - QUNCONTROLLED = (14.77 CFS - 3.14 CFS) = 11.63 CFS

BMP FACILITY DESIGN CALCULATIONS

Plan Name: 301 W Broad Street		Date: January 24, 2013
Plan Number:		Engineer: DMG
PART 1: SUBAREA DESIGNATION AND DESCRIPTION.		
A1	SITE DEVELOPED UNCONTROLLED	"C" ACRES
A2	SITE DEVELOPED CONTROLLED	0.90 0.480
A3	SITE DEVELOPED UNCONTROLLED	0.90 1.280
		0.90 0.780
	TOTAL	2.54
PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE		
(A)	AREA OF SITE	(a) 2.54 Ac
Subarea	Description	"C" ACRES C X A
A1	SITE DEVELOPED UNCONTROLLED	0.90 0.480 0.43
A2	SITE DEVELOPED CONTROLLED	0.90 1.280 1.15
A3	SITE DEVELOPED UNCONTROLLED	0.90 0.780 0.70
	TOTAL =	2.29
PART 3: CALCULATE TOTAL PHOSPHOROUS REMOVAL FOR SITE		WT."C" = 0.90
Subarea	BMP Type Removal Eff. (%) Area Ratio "C"Factor Ratio Product	
A2	SITE DEVELOPED CONTROLLED (STORMFILTER OR APPROVED EQUAL)	50 0.50 1.00 25
	TOTAL =	25 Percent (%)
PART 4: DETERMINE COMPLIANCE WITH PHOSPHOROUS REMOVAL REQUIREMENT		
$\%Prem = [1-0.9x((pre/post))x100\%$		
	lpre =	83%
	lpost =	95%
	Req'd Removal:	21.37%
If Part 3	25% is greater than	21.37% Then the phosphorous removal requirement is satisfied

STORMWATER MANAGEMENT NARRATIVE:

SITE LOCATION:
THE SITE IS BOUNDED BY WEST BROAD STREET TO THE NORTH, WINTER HILLS SUBDIVISION TO THE WEST, WEST ANNANDALE ROAD TO THE SOUTH AND A PARKING LOT AND BURKE AND HERBERT BANK TO THE EAST. THE ADJACENT PROPERTIES DO NOT DRAIN ONTO THE EXISTING SITE.

EXISTING CONDITIONS:
EXISTING SITE CONDITIONS PRESENT MULTIPLE PARKING LOTS, A POST OFFICE, RESTAURANT AND IT'S ASSOCIATED PARKING LOT. THE RUNOFF COEFFICIENT HAS BEEN CALCULATED AS 0.80 AND A COMPUTED 10-YEAR RUNOFF OF 14.77 CFS.

EXISTING CONDITIONS:
THE EXISTING 2.54 ACRE SITE CONTAINS MULTIPLE PARKING LOTS, A POST OFFICE, A RESTAURANT AND IT'S ASSOCIATED PARKING LOT. THE SITE IS CURRENTLY 83% (2.11 AC) IMPERVIOUS. THE SITE CURRENTLY PROVIDES NO DETENTION THAT DISCHARGE INTO AN EXISTING 15" CMP STORM DRAIN PIPE THAT DRAINS INTO AN EXISTING CLOSED CONDUIT SYSTEM WITHIN EXISTING ANNADALE ROAD TO THE SOUTH.

DETAILED INFORMATION ON THE DRAINAGE CURRENTLY IN THE CLOSED CONDUIT SYSTEM WAS NOT AVAILABLE. THE PIPE HAVE BEEN ASSUMED TO BE AT 80% CAPACITY.

RE-DEVELOPMENT CONDITIONS:

THE EXISTING PARKING LOTS, POST OFFICE, AND RESTAURANT WILL BE DEMOLISHED AND RE-DEVELOPED WITH HARRIS TEETER ON THE FIRST FLOOR AND RESIDENTIAL ON THE SECOND FLOOR. THE STRUCTURE WILL INCLUDE A MULTI-LEVEL PARKING GARAGE. THE SITE WILL HAVE TWO ZONING CATEGORIES: OFFICE/COMMERCIAL AND RESIDENTIAL.

THE IMPERVIOUS AREA WILL INCREASE TO 2.41 AC (95%) AS A RESULT OF THE RE-DEVELOPMENT. 2.06 ACRES OF RUN-OFF GENERATED FROM THE RE-DEVELOPMENT AREA WILL BE COLLECTED BY A SERIES ROOF DRAINS AND STORM PIPES AND DIRECTED TO A PROPOSED UNDERGROUND STORMWATER MANAGEMENT FACILITY LOCATED AT THE SOUTH SIDE OF THE SITE. THE FACILITY WILL BE PARTIALLY LOCATED UNDERNEATH THE BUILDING WITH ACCESS BEING PROVIDED JUST SOUTH OF THE BUILDING.

THE PROPOSED STORMWATER MANAGEMENT FACILITY WILL PROVIDE DETENTION AND TREATMENT OF THE STORMWATER, FOR BOTH COMMERCIAL AND RESIDENTIAL AREAS, BEFORE IT IS DISCHARGED FROM THE SITE. A CLOSED CONDUIT OUTFALL WILL BE CONNECTED TO THE STORM DRAIN SYSTEM IN ANNANDALE ROAD. A PI PLAN IS PROPOSED DOWNSTREAM OF THIS SITE IN WHICH THE STORM DRAIN PIPE WILL BE RE-EVALUATED AT THAT TIME. THE PEAK FLOW FROM THE SITE WILL BE BROUGHT BELOW CURRENT EXISTING PEAK FLOW, WHICH WILL SHOW ADEQUATE OUTFALL.

WATER QUANTITY:

THE POST-DEVELOPMENT RUN-OFF WILL BE DETAINED WITHIN AN UNDERGROUND STORAGE SYSTEM, (I.E. MAXCHAMBER OR APPROVED EQUIVALENT), WHICH WILL RELEASE STORMWATER THROUGH A CONTROL STRUCTURE DESIGNED TO MEET THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL STORMWATER DISCHARGE REQUIREMENTS.

THE MAXIMUM ALLOWABLE RELEASE RATE, BASED ON THE EXISTING PEAK FLOW AND THE UNCONTROLLED POST-DEVELOPMENT PEAK FLOW IS 11.63 CFS FOR THE 10 YEAR STORM. THE PROPOSED UNDERGROUND DETENTION FACILITY ON-SITE WILL BE DESIGNED TO MITIGATE STORMWATER GENERATED BY THE RE-DEVELOPMENT IN EXCESS OF THE ALLOWABLE DISCHARGE.

WATER QUALITY/BMP NARRATIVE:

STORMWATER QUALITY REQUIREMENTS WILL BE MET BY INSTALLATION OF AN UNDERGROUND STORM FILTER SYSTEM, (I.E. CONTECH, OR APPROVED EQUIVALENT), WHICH WILL TREAT THE FIRST HALF-INCH OF RUN-OFF FROM THE ON SITE ROADWAY AND BUILDING IMPERVIOUS AREAS, AS INDICATED ON SHEET 11, PER THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL REQUIREMENTS. ANALYSIS HAS DETERMINED THAT ALTHOUGH A REMOVAL RATE OF ONLY 21.37% IS REQUIRED UNDER THE RE-DEVELOPMENT CRITERIA, A TOTAL OF 25% REMOVAL EFFICIENCY IS ACHIEVED WITH THE PROPOSED BMP SYSTEM.

ADEQUATE OUTFALL ANALYSIS:

THE STORMWATER SYSTEM OUTFALLS TO THE CLOSED CONDUIT SYSTEM TO THE SOUTH UNDER ANNANDALE ROAD. THIS SYSTEM HAS BEEN ANALYZED ASSUMING THE PIPES ARE AT 80% CAPACITY AND SHOWS THAT THEY ARE UNDERSIZED FOR THE EXISTING SITE. AT THE TIME OF FINAL ENGINEERING, IT WILL BE DEMONSTRATED THAT THE PROPOSED DEVELOPMENT HAS ADEQUATE OUTFALL CAPACITY. THE RE-DEVELOPMENT RELEASE RATE FROM THE APPLICATION SITE WILL BE LESS THAN THE EXISTING CONDITIONS RELEASE RATE. ADEQUATE OUTFALL WILL BE PERFORMED ON THREE PIPE RUNS DOWNSTREAM FROM THE PROPOSED DEVELOPMENT AND SHOWN TO HAVE CAPACITY FOR THE PROPOSED DEVELOPMENT. THE PROPOSED PI PLAN DOWNSTREAM OF THIS SITE WILL RE-EVALUATE THE STORM DRAIN PIPE PAST THE THREE STORM DRAIN PIPES AT THAT TIME. DETAILED OUTFALL ANALYSIS WILL BE PROVIDED AT THE TIME OF FINAL SITE PLAN.

STORMWATER COMPUTATIONS:

FROM POINT	TO POINT	AREA DRAIN "A" (ACRES)		RUN-OFF COEF.	CA		INLET TIME	RAIN FALL	RUN-OFF Q	INVERT ELEVATIONS		LENGTH	n	ACTUAL SLOPE	MIN. SLOPE	DIA.	CAPA- CITY	FULL FLOW VEL	ACTUAL VEL.	FLOW TIME MINUTES		REMARKS										
		INCRE- MENT	ACCUM- ULATED		INCRE- MENT	ACCUM- ULATED				MIN- UTES	IN. / HR.									C.F.S.	LOWER END (10)		UPPER END (11)	FT.	%	%	IN.	C.F.S.	F.P.S.	F.P.S.	INCRE- MENT	ACCUM- ULATED
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)															
2451	2498							3.14	314.98	317.08	166.60	0.024	1.26		15	3.93	3.20	3.20	0.867383	0.87	Assumed 80% capacity											
2498	PP Inlet	0.00	0.00	0.00	0.00	0.00	5.00	7.27	14.77	313.78	314.17	26.06	0.024	1.51	17.82	15	4.30	3.51	3.50	0.124095	5.12	Run-off Q has 11.63 allowable CFS added										
PP Inlet	2478	1.02	1.02	0.85	0.87	0.87	5.00	7.27	17.86	313.26	313.78	34.46	0.024	1.51	26.05	15	4.30	3.50	3.50	0.164095	5.16	Run-off Q has 11.63 allowable CFS added										
2478	2800	0.00	0.00	0.00	0.00	0.00	5.00	7.27	11.63	308.51	313.01	259.16	0.013	1.74	1.23	18	13.84	7.83	8.70	0.496475	5.50											

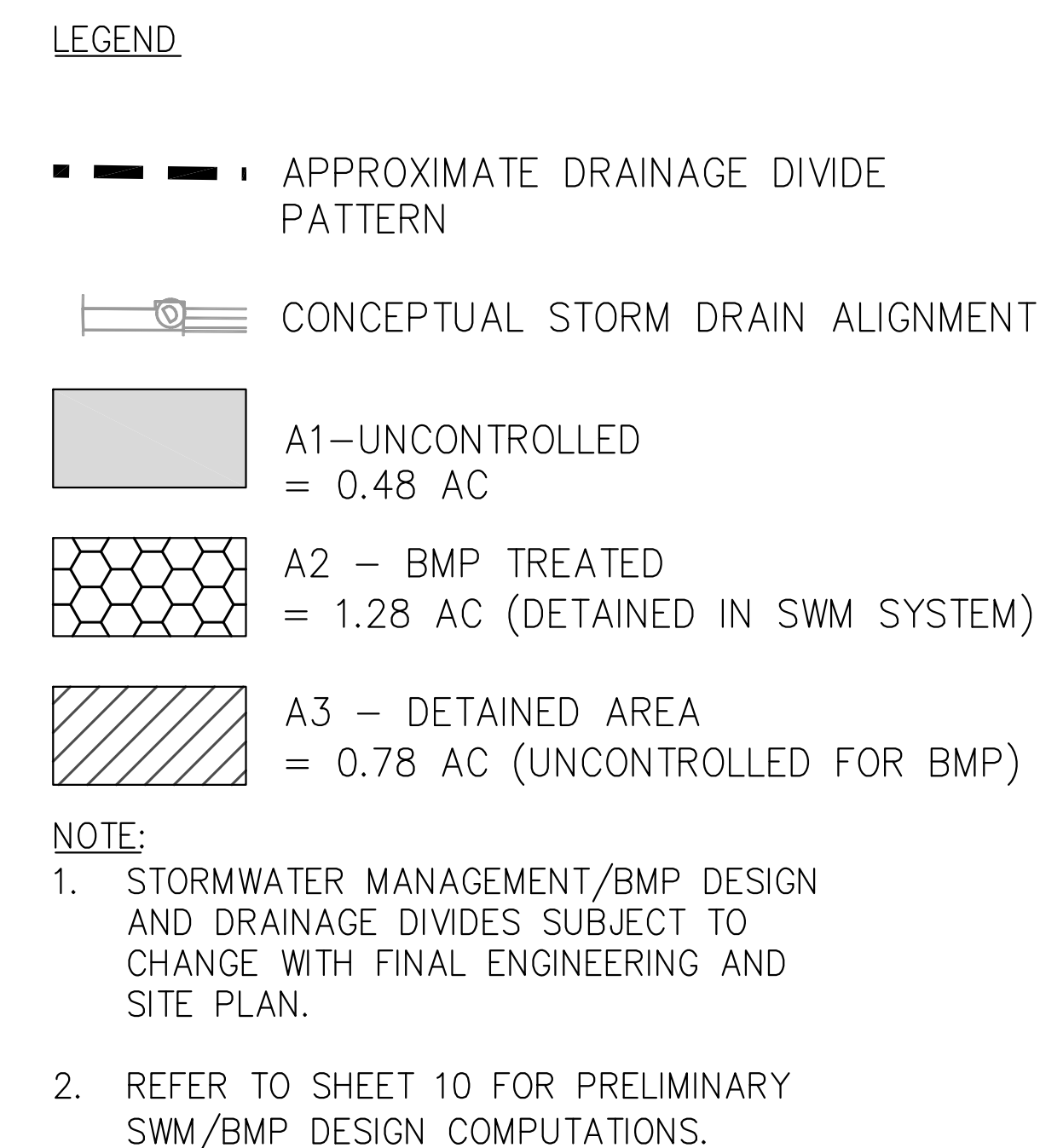
CONCEPTUAL SWM AND BMP COMPUTATIONS AND NARRATIVE

301 WEST BROAD STREET

CITY OF FALLS CHURCH, VIRGINIA

PLAN STATUS
01/23/13 CITY COMMENTS

DATE DESCRIPTION
ED/DM ED/DM DHH
DESIGN DRAWN CHKD
SCALE H: V:
JOB No. 4792-01-001
DATE : October 2012
FILE No. 4792-D-ZP-001



Scale: 1" = 30' - 0"

15' 0' 15' 30' 60'